

REMARKS/ARGUMENTS

Status of the Claims

Claims 2 to 17, 19 to 28 and 31 to 34 remain in the application.

Amendments to the Claims

Claim 2 has been amended to replace the expression “point-to-point” with the expression “point-to-multi-point” for consistency with the remainder of the claims and description.

Claim 25 has been amended to replace “At least one network element” with “A network element”. Claim 26 has been amended to recite “A cellular network comprising ~~the~~ at least one network element of claim 25”, where the strikethrough indicates text deleted from the claim.

35 U.S.C. § 112 Rejections

The Examiner has rejected claim 9 under 35 U.S.C. 112 as failing to comply with the written description requirement. It is alleged that there is no support in the description for “wherein the states for PMP communications comprise dormant, standby and active” as recited in claim 9. Applicant submits that there is support for this limitation on page 10, line 3 to 5 and in PMP Operation block 40 in Figure 2. Applicant respectfully requests that the Examiner reconsider and withdraw the rejection.

The Examiner has rejected claim 25 under 35 U.S.C. 112 as failing to comply with the written description requirement. It is alleged that there is no support in the description for “At least one network element” as recited in the preamble of claim 25. Claim 25 have been amended as described above. Applicant respectfully requests that the Examiner reconsider and withdraw the rejection.

35 U.S.C. § 103 Rejections

The Examiner has rejected claims 2 to 6, 8, 10 to 17, 19, 20, 25 to 28, 31, 32 and 34 under 35 U.S.C. 103(a) as being unpatentable over Grube *et al.* (U.S. Patent No. 5,666,661) in view of Ma *et al.* (U. S. Patent No.5,995,500).

In rejecting claims under 35 U.S.C. § 103(a), the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). *See also In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). It is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d, 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966), viz., (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the art. Additionally, in making a rejection under 35 U.S.C. § 103(a) on the basis of obviousness, the Examiner must provide some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the appellant. *See Oetiker*, 977 F.2d at 1445. *See also Piasecki*, 745 F.2d at 1472. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See Oetiker*, 977 F.2d at 1445; *Piasecki*, 745 F.2d at 1472.

Applicant's analysis below demonstrates that the Examiner has failed to fulfil the initial burden for a finding of obviousness under 35 U.S.C. 103.

Applicant submits that claims 2 to 6, 8, 10 to 17, 19, 20, 25 to 28, 31, 32 and 34 of the present application are patentable over Grube *et al.* and Ma *et al.*, as the Examiner has not properly determined the differences between the claimed invention and the prior art. Furthermore, the Examiner has not provided a valid explanation to support an obviousness rejection under 35 U.S.C. 103. Applicant's reasoning is detailed below.

Differences between the claimed invention and the prior art

The following is a discussion of how the cited references do not disclose all the elements of the rejected claim. While it may be considered that "the mere existence of differences between prior art and an invention does not establish the invention's non-obviousness", Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one skilled in the art (Examination Guidelines for Determining

Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, published in Federal Register Vol. 72, No. 195 October 10, 2007). As such, if elements from a claim are not disclosed by the combination of cited references and no valid reasoning is provided why the missing elements would be obvious, this may provide a strong basis for why a claim should not be rejected based on obviousness.

With regard to independent claim 2, the Examiner has equated “the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications by communicating directly with another mobile station using signals in form similar to the cellular communications signals and using said cellular spectral resource, wherein the cellular communications signals are CDMA (code division multiple access) signals or OFDM (orthogonal frequency division multiplexing) signals” recited in claim 2 with the disclosure in Grube *et al.* at column 3 line 53 to column 4 line 17. Applicant submits that there is no specific disclosure of either OFDM or CDMA in the portion of Grube *et al.* indicated by the Examiner.

Furthermore with regard to independent claim 2, the Examiner has alleged that Grube *et al.* does not disclose the limitation “wherein said cellular spectral resource comprises a downlink PMP band, and an uplink PMP band, wherein the mobile station is adapted to participate in wireless PMP (point-to-multi-point) communications using the downlink PMP band for receiving and using the uplink PMP band for transmitting, the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications using the PMP uplink band for both transmitting and receiving in a TDD (time division duplex) manner”, but that Ma *et al.* does disclose this limitation.

In particular, the Examiner equates “wherein said cellular spectral resource comprises a downlink PMP band, and an uplink PMP band, wherein the mobile station is adapted to participate in wireless PMP (point to multi-point) communications using the downlink PMP band for receiving and using the uplink PMP band for transmitting” as recited in claim 2 with the subject matter disclosed at column 9, line 46 to column 10, line 2 of Ma and “the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications using the PMP uplink band for both transmitting and receiving in a TDD (time division duplex) manner” as recited in claim 2 with column 9, lines 23 to 37 of Ma.

Applicant respectfully disagrees with the Examiner's characterization of what is disclosed in Ma *et al.* Column 9, lines 23 to 37 of Ma discloses how the in-range determination is made in a TDD implementation. Preferably, the MSC determines that the in-range condition is satisfied when the received signal strength from MS2 as measured by a first base station is greater than a threshold. Ma *et al.* also discloses that it would be appreciated that the threshold for a FDD implementation and a TDD implementations could be different. Finally, Ma *et al.* discloses that the communication mode could be set to direct mode or indirect mode depending on whether the signal strength is below or above the threshold. There is no suggestion or disclosure in Ma *et al.* of the direct mode of communication, which would be more closely representative of the P2P mode recited in claim 2 than the indirect mode, "using the PMP uplink band for both transmitting and receiving in a TDD (time division duplex) manner". The device recited in claim 2 uses the downlink and uplink PMP bands respectively for receiving and transmitting in PMP mode, but uses only the PMP uplink band for both transmitting and receiving while in wireless P2P mode.

In addition, claim 2 defines the "cellular spectral resource comprises a downlink PMP band, and an uplink PMP band". This indicates a frequency division duplex (FDD) mode in which separate spectrum is used for uplink and downlink. While Ma *et al.* does disclose a FDD mode, Ma *et al.* discloses the use of either the FDD implementation, as illustrated in Fig. 3(b), or a TDD implementation, as illustrated in Fig. 3(a). There is no suggestion that the TDD implementation is implemented in conjunction with the FDD implementation.

The same arguments apply to independent claims 25 and 31.

For at least the reasons discussed above, Applicant submits that there are differences between what is disclosed in Grube *et al.* and Ma *et al.* and that which is disclosed in independent claims 2, 25 and 31 of the present application resulting in a clear lack of at least one limitation in the combination of Grube *et al.* and Ma *et al.* that is alleged to equate to the limitations recited in the claims. Furthermore, the Examiner has not provided a suitable reason why the missing limitations would be obvious to one skilled in the art.

Explanation to support an obviousness rejection

As noted above, for the Patent Office to properly combine references in support of an obviousness rejection, the Patent Office must identify a reason why a person of ordinary skill in the art would have sought to combine the respective teachings of the applied references. Applicant appreciates that the Examiner has articulated a reason why the claimed invention would have been obvious. However, for reasons detailed below, the Examiner's articulated reason can not be regarded as being valid.

The Examiner has alleged that it would have been obvious to combine what has allegedly been disclosed in *Ma et al.* with what has allegedly been disclosed in *Grube et al.* "in order to provide a method and apparatus for direct communication between mobile stations". While Applicant submits that each respective reference discloses particular methods and apparatuses to facilitate direct communication between mobile stations, which may suggest that the references would be known to one skilled in the art in a similar field, the references do not disclose what the Examiner alleges. The Examiner has at least in part based his reasons for combining the references on the characterizations of *Grube et al.* and *Ma et al.*, which Applicant submits are incorrect. As the underlying basis of why the references were combined is flawed, this is evidence that the reason put forth by the Examiner for combining the references does not establish a *prima facie* case of obviousness.

For at least the above reasons, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness and it is respectfully requested that the Examiner reconsider and withdraw the rejection.

Claims 3 to 6, 8, 10 to 17, 19, 20, 26 to 28, 32 and 34 are dependent upon one of independent claims 2, 25 or 31, either directly or indirectly, and based on this dependence, Applicant respectfully submits that these claims patentably distinguish over the combination of *Grube et al.* and *Ma et al.*

Further reasoning why some of the dependent claims are allowable is provided below. Lack of discussion of particular claims is not to be considered an admission that the particular limitations of claims are disclosed by the reference or combination of references involved.

With respect to claim 3, claim 3 recites “a first receiver for receiving PMP communications on the downlink PMP band” and “a second receiver for receiving P2P communications on the uplink PMP band”. It is alleged that Grube *et al.* discloses this limitation at column 3, line 53 to column 4, line 17. However, Applicant submits that Grube *et al.* does not specifically disclose first and second receivers and so does not disclose what is recited in claim 3.

With respect to claim 5, claim 5 recites “a receiver for receiving PMP communications on the downlink PMP band, and for receiving P2P communications on the uplink PMP band”. It is alleged that Grube *et al.* discloses this limitation at column 3, line 53 to column 4, line 17. However, Applicant submits that Grube *et al.* does not specifically disclose receiving PMP communications on the downlink PMP band and receiving P2P communications on the uplink PMP band and so does not disclose what is recited in claim 5.

Claims 4 and 6 are dependent on claims 3 and 5, respectively. These claims should be allowable for at least their dependence upon claims 3 and 5.

Further Obviousness Rejections

The Examiner has rejected claims 7 and 21 to 23 under 35 U.S.C. 103(a) as being unpatentable over Grube *et al.* in view of Ma *et al.* and further in view of Kuffner (U.S. Patent No. 6,954,446). The Examiner has rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Grube *et al.* in view of Ma *et al.* and further in view of Raffel *et al.* (U.S. Patent Application Publication 20030050090). The Examiner has rejected claim 24 under 35 U.S.C. 103(a) as being unpatentable over Grube *et al.* in view of Ma *et al.* and further in view of Caldwell *et al.* (U. S. Patent No. 7,167,454).

Claims 7, 9 and 21 to 24 are dependent upon claim 2, either directly or indirectly. Applicant submits that none of Kuffner, Raffel *et al.* or Caldwell *et al.* discloses the limitations alleged to be disclosed by Grube *et al.* and Ma *et al.*, but which are not taught by Grube *et al.* and Ma *et al.* For at least their dependence upon claim 2, Applicant submits that the various combinations of references do not teach all the limitations of claims 7, 9 and 21 to 24, as discussed above with regard to the rejection of claim 2.

Furthermore, with regard to claim 21, the Examiner alleges that Grube *et al.* and Ma *et al.* fail to disclose the limitation recited in claim 21. It is alleged that Kuffner discloses this limitation. The Examiner equates the limitation “further adapted to perform at least one of rate control and power control for P2P communications in cooperation with the other mobile station” with the disclosure at column 4, lines 13 to 18 of Kuffner. Respectfully, Applicant submits that column 4, lines 13 to 18 merely discloses that “Each of the three example receivers may, in general, have a default personality. That is, at power up or under a given set of field circumstances or user assignment, each of the three receivers operates with a default receiving band, demodulation scheme, decoding protocol, decryption algorithm (where applicable), etc.” Applicant submits that there is no suggestion or specific disclosure of the transceiver disclosed in Kuffner cooperating with other mobile stations for performing at least one of rate control and power control for P2P communications.

Furthermore, with regard to claim 22, the Examiner alleges that Grube *et al.* and Ma *et al.* fail to disclose the limitation recited in claim 22. It is alleged that Kuffner discloses this limitation. The Examiner equates the limitation “adapted to perform at least one of rate control and power control for P2P communications under control of the network”. Applicant submits that there is no suggestion or specific disclosure of the transceiver disclosed in Kuffner under control of the network, performing at least one of rate control and power control for P2P communications.

Furthermore, with regard to claim 23, the Examiner alleges that Grube *et al.* and Ma *et al.* fail to disclose the limitation recited in claim 23. It is alleged that Kuffner discloses this limitation. The Examiner equates the limitation “adapted to initiate P2P communications with a default power, and to request authorization to use additional power and/or channel resources from the network should P2P communications not be successful”. While Kuffner does disclose a default personality upon power up, there is no suggestion or specific disclosure of the transceiver requesting authorization to use additional power and/or channel resources from the network should P2P communications not be successful.

The Examiner has at least in part based his reasons for combining the references, in particular the combination of Grube *et al.* and Ma *et al.*, and also further combining Kuffner, on


the characterization of the cited references, which Applicant indicates above is incorrect. As the underlying basis of why the references was combined in flawed, this is further evidence that the reason put forth by the Examiner for combining the references does not establish a *prima facie* case of obviousness.

For at least the above reasons, Applicant submits that the Examiner has failed to establish a *prime facie* case of obviousness and it is respectfully requested that the Examiner reconsider and withdraw the 35 U.S.C. 103(a) rejection of the claims.

In view of the foregoing, early favourable consideration of this application is earnestly solicited.

Respectfully submitted,

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